

METEOROLOGY FOR OCTOBER, 1870.

PRIVATE OBSERVATORY, HOBART TOWN.

Day of Month.	Bar. 37 feet abv. sealevel corrected & reduced.		Self-Registering Thermometers.				Wind.		Rain in Inches.
	Highest.	Lowest.	Highest in shade.	Lowest in shade.	Highest in sun.	Lowest on grass.	Direction from three daily re- gisters.	Force in lbs. per square foot.	
	In.	In.	°	°	°	°			
1	29.556	29.510	67	47	101.0	40.5	NW	3.38	
2	29.821	29.813	61	44	99.0	38.0	NW	10.94	
3	30.015	29.942	64	49	99.0	46.0	NW N	1.56	
4	30.160	30.109	68	52	107.0	43.0	NW	1.04	
5	30.150	29.999	74	41	110.0	37.5	NW SE	1.04	
6	29.776	29.749	75	53	110.5	46.5	NW E	10.68	0.16
7	29.897	29.879	70	49	83.0	47.0	SE E	.52	0.04
8	30.061	30.015	66	44	105.0	35.5	NW E SE	.78	
9	29.792	29.477	66	44	95.0	42.0	NW SW	2.86	0.52
10	30.087	29.858	54	42	86.0	37.0	SW SE	1.30	0.01
11	30.330	30.293	69	39	109.0	33.5	NW NE SE	1.04	
12	30.412	30.361	69	44	107.0	39.5	NW SE	1.56	
13	30.224	30.004	74	47	109.0	42.5	NW	5.72	
14	29.984	29.907	75	50	111.0	42.0	NW SE	.52	0.21
15	29.945	29.866	60	44	97.5	40.0	E NE SE	.52	
16	30.084	30.000	64	47	94.0	37.0	NW SE	1.04	0.24
17	30.258	29.230	59	43	91.0	39.5	NW SE	.52	0.01
18	30.297	30.262	64	48	104.0	41.0	SW SE	1.04	
19	30.239	30.015	64	47	103.5	39.0	NW NE	.78	0.42
20	29.465	29.256	73	62	109.0	47.5	SE NW W	.78	0.05
21	29.417	29.233	64	50	88.0	47.5	NW NE NW	1.04	0.22
22	29.787	29.418	61	47	89.5	44.0	NW W	15.62	0.20
23	30.078	30.052	71	49	110.0	38.5	NW SE	.52	
24	30.145	29.952	70	44	110.0	43.0	SE	.52	
25	29.854	29.793	74	53	99.0	51.0	NW SE NW	.78	
26	30.255	30.148	62	43	101.0	41.5	N SE	3.38	
27	30.294	29.977	71	46	103.5	45.0	NW	3.12	0.07
28	29.779	29.600	81	52	113.0	50.0	N E NW	.78	0.07
29	29.574	29.451	79	53	85.0	55.5	NW	.78	
30	30.056	29.774	71	54	114.0	50.0	SW W SE	8.38	0.03
31	30.241	30.150	72	48	109.5	42.5	NW SE	1.44	
Monthly mean 29.939			57.96	101.71	42.68		Total force	80.53	2.34

The mean in all cases is taken from the sums of the three daily registers, and not from the maximum and minimum.

The direction of the wind is registered from currents moving at a height of 192 feet and the force according to Lind's Wind Gauge. The supposition, however, of a uniform velocity during the month is a very arbitrary one, and the results can be considered only approximately correct.

The relations of the quantities of rain which fell under the different winds are registered each evening at sundown.

The 25 years' standard tables are used for obtaining the difference from the average.

Leafing, Flowering, and Fruiting of a few Standard Plants in the Royal Society's Gardens during the month.

10th.—*Carpinus betulus* commencing to break into leaf.

19th.—*Ailanthus glandulosa* ditto ditto.

24th.—*Tilia Europea* ditto ditto.

25th.—*Morus niger* ditto ditto.

28th.—Seeds of Elm commencing to fall.

31st.—*Melia azederach* commencing to break.

Barometer mean, 29.939 in., being 0.155 in. above the average.

Temperature mean, 57.96°, being 4.02° above the ditto.

Solar intensity mean, 101.71°, being 6.11° above the ditto.

Dew point mean, 46.6° being 2.2° above the ditto.

Humidity of air mean, .68, being .05 per cent. below the ditto.

Elastic force of vapour mean, .323, being .028 per cent. above the ditto.

Total amount of rain, 2.34 in., being 0.37 in. above the ditto.

Increase of spontaneous evaporation on rainfall, 2.20 in.

Mean amount of ozone, 7.10, being 0.82 of chromatic scale below ditto.

Electricity active on the 2nd, 3rd, 18th, 19th, 23rd, 26th, 30th, and 31st.

Aurora on the 12th and 25th.

More or less snow on Mount Wellington all through the month.

FRANCIS ABBOTT.

NOTES ON THE METEOROLOGY AND MORTALITY OF THE MONTH OF OCTOBER, 1870.

BY DR. E. SWARBRECK HALL.

On the whole the weather this month was favourable to health, the deaths being considerably below the average, and nearly half of them persons above 60 years old.

Atmospheric pressure was very high with wide ranges, and as is usual was very fatal to feeble, diseased, and aged persons. The mean 29·939, was + 1·55 above the average. The extreme range was from 30·412 on the 12th to 29·256 on the 20th. On fourteen days the mutations exceeded one-fifth of an inch. On the 20th it was nearly three-fourths of an inch (·526), both days of heavy floods in Victoria, though with only a moderate rainfall here.

Wind-force, 80·53lbs., was, 19·42lbs below the October average. North-west winds had 44 out of the 93 records, with more than half of the total forces. The strongest wind, 10·42lbs. pressure to the square foot, was from the west on the 22nd. There were 18 calms, being + 2·72 above the average.

Temperature, 57·96 degrees, was + 4·02 above the mean. The maximum 81 occurred on the 28th, the minimum 39 on the night of the 11th.

Daily range of temperature mean, 29·39 degrees, was + 1·72 above the average. On the 5th the extreme range occurred being 33 degrees.

Solar-Intensity mean, 101·71 degrees, was + 6·11 above the average. The hottest day was the 30th when the thermometer in the sun rose to 114 degrees.

Terrestrial Radiation mean, 42·68 degrees, was + 0·69 above the average. The lowest temperature by this thermometer was 33·5 degrees in the night of the eleventh.

Elastic force of vapour mean, 323, was + 28 above the average. The range was from 104 on the 22nd to 581 on the 29th.

Humidity mean, 68, was — 5 below the average, notwithstanding the copious fall of rain.

Rainfall, 2·34 inches, was + ·37 above the average. It fell on 14 days which is only—·90 below the average. The greatest amount on any day was ·52 of an inch on the 9th, and the next was ·42 on the 19th. Other days also had sufficient to flush the drains and sewers, but none were heavy enough to cause floods. Health and vegetation were promoted by this genial rainfall. Snow was never absent from Mount Wellington during the month, and received frequent additions.

Spontaneous evaporation occurred to the amount of 4·54 inches, being nearly double the amount of rainfall, as might be expected with so much sunshine and wind.

Cloud mean, 5·68 was — ·02 below the average.

Ozone had a mean of 7·10 which is - ·02 below the average. The predominance of the north-west winds no doubt has the cause of this.

The *Electrometer* records were positive 19, with tension from 2·5 to 8; negative 36, with tension from 1 to 6; nils 7.

The deaths in the month amounted to 34, being—19 3-13ths less than the average of the previous 13 years, and 15 less than October 1869 had. Under one year of age there were five deaths, the oldest being only seven weeks, the other four from twelve hours to nine days. From one to five years old there were four deaths; from five to ten, one only; from ten to twenty the deaths were two; from twenty to sixty only six, while in October, 1869, there were twenty-one. At sixty and all ages above the deaths were sixteen, the oldest being a woman eighty-four years old. At all ages it is very remarkable how large a proportion were males—twenty-eight to six females. There were only three inquests, two of them cases brought to hospital from other districts; including these there were only six deaths in the public hospital. Both invalid establishments at the Cascades and the Brickfields had four deaths each, the mean age of each being respectively 59 $\frac{3}{4}$ and 72 $\frac{1}{4}$. In the *Zymotic* class of diseases there was only one death, a child aged between three and four years from *Diphtheria*. *Consumption* caused three deaths, two of them, aged ten and fifteen years, were natives of Tasmania.